















CORPORAL JCTD

Harry H. Dreany

Marine Aviation Industry Day II

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Unclassified

Acronym Decipher



Reconnaisance

Provider

Operationally

Responsive

Attack L ink



Capability

Technology

Demonstration

JCTD Purpose:

...to demonstrate, operationally assess, rapidly deploy, and transition capability solutions and innovative concepts to address the joint, coalition and interagency operational gaps and shortfalls.

Key JCTD Players

JCTD Sponsor: USCENTCOM



Oversight Executive (OE): Mr. Scott Stephens OSD / AS&C

Lead Service: Maj Mikel Huber HQMC DC(A)

Operational Manager (OM): Jerry Gelling CENTCOM J8/SA

Technical Manager (TM): Mr. Harry Dreany NSWC Dahlgren

Transition Manager (XM): LCDR Scott Rivera PMA-234 (NAVAIR)







CORPORAL CONOPS



What is CORPORAL?

Technical Approach

Spiral Development to address on-demand NTISR and SA (Spiral 1) and on-demand EA and TISR (Spiral 2) to the grunt for his target area of interest.

- Develop, integrate, and demonstrate systems capabilities affected by hardware, software, and architectures with the following characteristics: (SPIRAL 1)
 - Scalable, IP-based, Open-Architecture, interoperable design:
 - Accommodates current and future operational systems and architectures, for example, The Enhanced Position Location Reporting System (EPLRS)
 - Integration of EPLRS and The Combat Information Network Applications System (CINAPS) server on a Litening Pod (NTISR) which facilitates rapid integration into existing systems without aircraft modification
- Scalable situational awareness based on available bandwidth and user interface that supports missions, needs, and locations filtered and tailored to the ground warfighter (SPIRAL 1)
 - Dismounted Digital Automated Communications Terminal (DDACT) integrated with EPLRS
 - Scalable network nodes

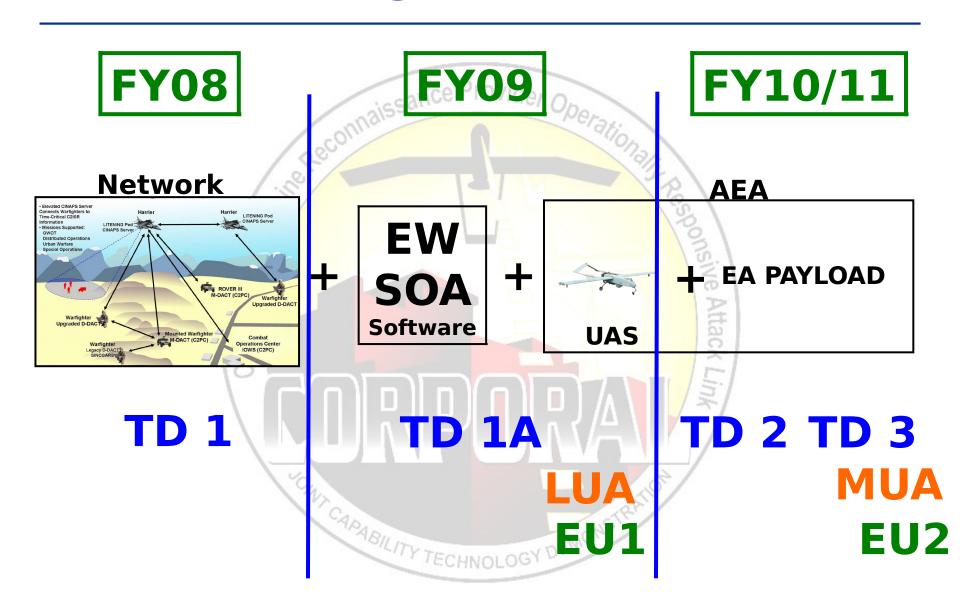
Technical Approach (Cont'd)

- Plug-and-Play, software reprogrammable, scalable, IP-based, Open-Architecture nonkinetic fires solution: (SPIRAL 2)
 - Provide the EW SOA
 - Provide TISR via UAS imagery
 - Integration of Electronic Attack (EA) payload onto a surrogate UAS
 - Transition target platform configuration is a Shadow 200 rewinged platform, with the payload delivered in a dual pod configuration
 - The design of the pod concurrent with surrogate integration and test.

Core Technologies

- LITENING Pod PNPII;
 - NGC TRL 7-9; Low risk; Demonstrated in TD-1 on the Harrier (AV-8B); integrated on F-18; EA-6B Testing
- Transition Target UAS Configuration:
 - Shadow RQ-7B Re-wing; Low Medium transition risk.
 TRL 7-9
- Network Components:
 - NGC -Combat Information Network Application Systems (CINAPS) TRL-5-6; Low risk; Demonstrated in TD-1
- Electronic Attack Payload Systems:
 - Solution currently under review

Program Plan



Resulting Goal

Provide "on-demand" collaborative SA & kinetic and non-kinetic fires to the small unit's Target Area of Interest (TAI).....

- Beyond Line Of Sight (BLOS) connectivity to ground forces leveraging manned and unmanned assets
- Near real-time direct delivery of time/space relevant information
 - Tailored to small unit request (battlefield fusion) optimizing available bandwidth
- **Scalable** from distributed small unit operations to major combat operations
- Rules based software algorithm-arbitrated deconfliction of kinetic and non-kinetic fires coordination
- On-demand, automated EA, where available, considering frequency deconfliction, ground specificity and asset availability/proximity
- Request forwarding to appropriate approval authority for all nonsourced requests
- Communications agnostic framework adaptable to current and planned waveforms and IP-based, open architecture networks



